Safety Attribute Inspection (SAI) Data Collection Tool 4.2.8 Simulators / Training Devices (OP) Revision#:3 Revision Date:09/15/2009

ELEMENT SUMMARY INFORMATION

Scope of Element:

Purpose (operator's responsibility): To ensure that simulators, training devices and training aids meet the requirements of the operator's FAA approved training program.

Objective (FAA oversight responsibility): To determine if the operator's Simulators/Training Devices process:

- Meets all applicable requirements of Title 14 of the Code of the Federal Regulations (14 CFR) and FAA policies,
- Incorporates the safety attributes, and
- Identifies any shortfalls in the operator's process.

Specific Instructions:

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SUPPLEMENTAL INFORMATION

Regulatory Requirements:

- 60.15, Initial qualification requirements
- 60.16, Additional qualifications for a currently qualified FSTD
- 60.17, Previously qualified FSTDs
- 60.20, Applicability of sponsor rules to persons who are not sponsors and who are engaged in certain unauthorized activities
- 60.25, Operation with missing, malfunctioning, or inoperative components
- 121.135, Manual contents
- 121.407, Training program: Approval of airplane simulators and other training devices.
- 121.409, Training courses using airplane simulators and other training devices.
- 121.921, Training devices and simulators

Related CFRs & FAA Policy/Guidance:

Related CFRs:

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FAA Policy/Guidance:

FAA Order 8900.1, Volume 3, Chapter 19 AC 120-40B, Airplane Simulator Certification AC 120-45A, Airplane Flight Training Device Qualification

SAI SECTION 1 - PROCEDURES ATTRIBUTE

Objective:

The questions in this section of the SAI will help verify that the operator's documented procedures identify who, what, when, where, and how those procedures are accomplished. These procedures must allow all personnel to perform their duties and responsibilities with a high degree of safety.

14 CFR part121.135(a)(1)

Tasi	ks
	The inspector shall accomplish the following tasks:
1	Review the information in the Supplemental Information section of this SAI.
2	Review the duties and responsibilities for management and other personnel who accomplish the processes associated with this element.
3	Review the documentation of the processes associated with this element.

Ques	tions		
1.1		cedures specify the approval and maintenance requirements for tors and training devices?	Yes No, Explain
	SRRs:	ed: Rev # 3 on 09/15/2009 60.20; 60.25; 121.407(a) f Question: Flag, Supplemental, Domestic	
	Relate	d Design JTIs:	
	1.	Check that the certificate holder uses an airplane simulator or training device approved for a training course that is specifically approved for the certificate holder, specifically approved for the type airplane and, if applicable, the particular variation within type, for which the training or check is being conducted, and specifically approved for the particular maneuver, procedure, or crewmember function involved. (JTI ID: 1)	
		Sources: 121.407(a)(1)	
	2.	Check that the certificate holder has a policy specifying how an airplane simulator or training device approved for a training course maintains the performance, functional, and other characteristics that are required for approval. (JTI ID: 87)	
		Sources: 121.407(a)(2)	
	3.	Check that the certificate holder has a policy specifying how an airplane simulator or training device approved for a training course is modified to conform with any modification to the airplane being simulated that results in changes to performance, functional, or other characteristics required for approval. (JTI ID: 88)	
		Sources: 121.407(a)(3)	
	4.	Check that the certificate holder has a policy specifying how an airplane simulator or training device approved for a training course is given a daily functional preflight check before being used. (JTI ID: 89)	
	5.	Sources: 121.407(a)(4) Check that the certificate holder has a policy specifying how an airplane	
	ა.	Check that the certificate holder has a policy specifying how an airplane simulator or training device approved for a training course has a daily discrepancy log kept with each discrepancy entered in that log by the	

	6.7.8.9.	appropriate instructor or check airman at the end of each training or check flight. (JTI ID: 90) Sources: 121.407(a)(5) Check that the certificate holder has a policy that each instructor, check airman, or representative of the Administrator conducting training, evaluation, or flight experience, and each person conducting the preflight inspection who discovers a discrepancy, including any missing, malfunctioning, or inoperative components in the flight simulator or training device, must write or cause to be written a description of that discrepancy into the discrepancy log at the end of the flight simulator or training device preflight or use session. (JTI ID: 91) Sources: 60.20 Check that the certificate holder has a policy that no person may knowingly use or allow the use of or misrepresent the capability of a flight simulator or training device for any maneuver, procedure, or task that is to be accomplished to meet training, evaluation, or flight experience requirements of this chapter for flight crewmember certification or qualification when there is a missing, malfunctioning, or inoperative (MMI) component that is required to be present and correctly operate for the satisfactory completion of that maneuver, procedure, or task. (JTI ID: 92) Sources: 60.25(a) Check that the certificate holder has a policy that any MMI component installed and required to operate correctly to meet the current Statement of Qualification, must be repaired or replaced within 30 calendar days, unless otherwise required or authorized by the NSPM. (JTI ID: 93) Sources: 60.25(b) Check that the certificate holder has a policy that a list of the current MMI components must be readily available in or adjacent to the flight simulator or training device for review by users of the device. Electronic access to this list via an appropriate terminal or display in or adjacent to the flight simulator or training device is satisfactory. The discrepancy log may be used to satisfy this requirement provided each currently MMI component is l	
1.2	Do the airplane	procedures specify when a simulator may be used instead of an e?	Yes No, Explain
	SRRs:	d: Rev # 3 on 09/15/2009 60.15; 60.16; 60.17; 121.407(c) Question: Flag, Supplemental, Domestic	
	Related	d Design JTIs:	
	1.	Check that the certificate holder has a policy specifying how the airplane simulator, to be used instead of the airplane to satisfy the in-	
		flight requirements of 121.439 and 121.441 and Appendices É and F of Part 121, is approved and meets the appropriate simulator requirements of appendix H, and Part 60. (JTI ID: 65)	
		Sources: 121.135(b)(1); 121.407(c)(1)	
1.3		cedures require meeting low-altitude wind shear training requirements	Yes
	using a	n approved, type-specific simulator?	☐ No, Explain ☐ Not Applicable

	 Updated: Rev # 3 on 09/15/2009 SRRs: 121.407(d); 121.409(d) Kind Of Question: Flag, Supplemental, Domestic Related Design JTIs: 1. Check that the certificate holder uses an airplane simulator approved under this section, instead of the airplane, to satisfy the pilot flight training requirements prescribed in the certificate holder's approved lowaltitude windshear flight training program. (JTI ID: 67) 	
	Sources: 121.135(b)(1); 121.407(d)	
1.4	Do the procedures specify the content of training courses that use airplane simulators?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 SRRs: 121.409(b) Kind Of Question: Flag, Supplemental, Domestic	
1.5	Do procedures require an FAA assigned qualification level for all simulators or flight training devices used in Advanced Qualification Program (AQP) training for:	Yes No, Explain Not Applicable
	 Proficiency evaluations, Training to proficiency, Determining if an individual or crew is ready for a proficiency evaluation, Meeting recency of experience requirements, and Line Operational Simulations (LOS)? 	
	Updated: Rev # 3 on 09/15/2009 SRRs: 121.921(a)(1); 121.921(a)(2); 121.921(a)(3); 121.921(a)(4) Kind Of Question: Flag, Supplemental, Domestic	
1.6	Do procedures require FAA approval of training equipment used in Advanced Qualification Program (AQP) training when intended for uses other than: • Proficiency evaluations, • Training to proficiency, • Determining if an individual or crew is ready for a proficiency evaluation, • Meeting recency of experience requirements, and • Line Operational Simulations (LOS)?	Yes No, Explain Not Applicable
	Updated: Rev # 3 on 09/15/2009 SRRs: 121.921(b)(1) Kind Of Question: Flag, Supplemental, Domestic	
1.7	Do procedures require the identification of training equipment by its nomenclature and intended use when it is submitted for FAA approval? Updated: Rev # 3 on 09/15/2009 SRRs: 121.921(b)(2) Kind Of Question: Flag, Supplemental, Domestic	Yes No, Explain Not Applicable
1.8	Do procedures require each AQP used training device to be part of a continuing program to provide serviceability and fitness, as approved by the FAA, to	Yes No, Explain

	perform	its intended function?	☐ Not Applicable
	Update	d: Rev # 3 on 09/15/2009	
	SRRs:	121.921(b)(3)	
	Kina Ot	Question: Flag, Supplemental, Domestic	
1.9	•	cedures address the intent of the guidance contained in FAA Order	Yes
	8900.1,	Volume 3, Chapter 19?	☐ No, Explain☐ Not Applicable
		d: Rev # 3 on 09/15/2009	
	Kind Of	Question: Flag, Supplemental, Domestic	
	Related	d Design JTIs:	
	1.	Check that the certificate holder has instructions specifying how the	
		simulator is evaluated and qualified by the National Simulator Program Manager, and approved by the operators Principal Operations Inspector. (JTI ID: 68)	
		Sources: FAA Order 8900.1, Volume 3, Chapter 19, Section 6, Paragraph 3-1235	
	2.	Check that the certificate holder has instructions that Hands on emergency drill training for items such as emergency exits and passenger oxygen systems should be conducted in a static aircraft, in an approved cabin mock up training device, or by use of an approved exit mock up training device. (JTI ID: 71)	
		Sources: FAA Order 8900.1, Volume 3, Chapter 19, Section 4,	
	•	Paragraph 3-1179	
	3.	Check that the certificate holder uses a ground training device(s), with varying levels of sophistication used for systems integration training, that have been individually evaluated by the Principal Operations Inspector. (JTI ID: 77)	
		Sources: FAA Order 8900.1, Volume 3, Chapter 19, Section 5, Paragraph 3-1206	
1.10	Do prod	cedures address the intent of the guidance contained in Advisory Circular	Yes
	120-40		☐ No, Explain☐ Not Applicable
	Update	d: Rev # 3 on 09/15/2009	☐ Not Applicable
		Question: Flag, Supplemental, Domestic	
	Related	d Design JTIs:	
	1.	Check that the certificate holder uses a simulator(s) evaluated under the	
		National Simulator Evaluation Program using procedures and criteria from this Advisory Circular. (JTI ID: 78)	
		Sources: Advisory Circular 120-40B, Paragraph 7a	
	2.	Check that the certificate holder uses an approved simulator(s) used for training or certification of airmen within an operator's training program. (JTI ID: 79)	
		Sources: Advisory Circular 120-40B, Paragraph 7b	
	3.	Check that the certificate holder uses a simulator(s) specifically approved for the level of qualification for use within a specific training program. (JTI ID: 80)	
		Sources: Advisory Circular 120-40B, Paragraph 7c	
	4.	Check that the certificate holder uses a simulator(s) located outside the United States used by U.S. operator's to train or certificate airmen from	

		the United States. (JTI ID: 81)	
		Sources: Advisory Circular 120-40B, Paragraph 7d	
	5.	Check that the certificate holder has instructions specifying how a simulator that has been previously qualified and approved at a particular level for an airplane type is not subject to the qualification process. (JTI ID: 82)	
		Sources: Advisory Circular 120-40B, Paragraph 7e	
1.11	Do pro	cedures address the intent of the guidance contained in Advisory Circular	☐ Yes
1	120-45		☐ No, Explain ☐ Not Applicable
	•	d: Rev # 3 on 09/15/2009 f Question: Flag, Supplemental, Domestic	
	Related	d Design JTIs:	
	1.	Check that the certificate holder uses a training device(s) approved for the level of qualification for use within a specific training program. (JTI ID: 84)	
		Sources: Advisory Circular 120-45A, Paragraph 5b	
	2.	Check that the certificate holder uses Level 6 and Level 7 training device(s) evaluated and qualified by the National Simulator Evaluation Program and approved by the Principal Operations Inspector. (JTI ID: 85)	
		Sources: Advisory Circular 120-45A, Paragraph7c	
	3.	Check that the certificate holder uses Level 2 through Level 5 training device(s) evaluated and qualified by the Principal Operations Inspector. (JTI ID: 86)	
		Sources: Advisory Circular 120-45A, Paragraph7c	
1.12	Does th SRRs?	ne manual contain general policies that require compliance with the	☐ Yes ☐ No, Explain
		d: Rev # 3 on 09/15/2009	
		121.135(b)(1)	
	Kina Oi	f Question: Flag, Supplemental, Domestic	
1.13	proced	ne manual refer to the appropriate sections of 14 CFR, and are the ures consistent with the appropriate 14 CFR references or Operating ate concerning this element?	Yes No, Explain
): lures for Flag and Supplemental operations must be consistent with ble foreign regulations as well.	
	SRRs:	d: Rev # 3 on 09/15/2009 121.135(a)(4); 121.135(b)(3) f Question: Flag, Supplemental, Domestic	
1.14		ne manual contain policies and procedures that include the duties and sibilities for personnel involved with this element?	Yes No, Explain
): cludes personnel, in addition to those required by 14 CFR part 119, who uthority and responsibility for processes covered by this element.	

Updated: Rev # 3 on 09/15/2009 SRRs: 121.135(b)(2) Kind Of Question: Flag, Supplemental, Domestic

	SAI SECTION 1 - PROCEDURES ATTRIBUTE
	Drop-Down Menu
1.	No policy, procedures, instructions, or information specified.
2.	Procedures or instructions and information do not identify who, what, when, where, how.
3.	Policy, procedures, or instructions and information do not comply with CFR.
4.	Policy, procedures, or instructions and information do not comply with FAA policy and guidance.
5.	Policy, procedures, or instructions and information do not comply with other documentation (e.g.,
	manufacturer's data, Jeppesen Charts, etc.).
6.	Policy, procedures, or instructions and information unclear or incomplete.
7.	Documentation quality (e.g., unreadable or illegible).
8.	Policy, procedures, or instructions and information inconsistent across certificate holder manuals
	(FOM - Flight Operations Manual to GMM - General Maintenance Manual, etc.).
9.	Policy, procedures, or instructions and information inconsistent across media (e.g., paper,
	microfiche, electronic).
10.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
11.	Other.

Objective: The questions in this section of the SAI will help determine if controls (i.e. checks and restraints) are designed into the processes associated with this element to ensure policies and procedures are followed to achieve desired results. Tasks The inspector shall accomplish the following task: 1 Review the policies, procedures, instructions, and information to understand the controls associated with this element.

Que	stions	
2.1	Are controls in place to ensure that usage of simulators and training devices is consistent with authorizations and approvals?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
2.2	Are controls in place to ensure that the operator's simulators and training devices are maintained in accordance with the regulations?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
2.3	Are controls in place to ensure that the operator's training devices are representative of the aircraft operated by the carrier?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
2.4	Are controls in place to ensure that any simulator or training device used in a training course is specifically approved for the operator?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009	
	Kind Of Question: Flag, Supplemental, Domestic	
2.5	Are controls in place to ensure that low-altitude wind shear training requirements are met using an approved, type-specific simulator?	Yes No, Explain Not Applicable
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
	Mila Of Question. Flag, Supplemental, Domestic	

	SAI SECTION 2 - CONTROLS ATTRIBUTE
	Drop-Down Menu
1.	No controls specified.
2.	Documentation for the controls do not identify who, what, when, where, how.
3.	Controls incomplete.
4.	Controls could be circumvented.
5.	Controls could be unenforceable.
6.	Resource requirements incomplete (personnel, facilities, equipment, technical data).

7. Other.

SAI SECTION 3 - PROCESS MEASUREMENT ATTRIBUTE

Objective:

Process measurements ensure the operator uses an internal evaluation function to detect, identify, and eliminate or control hazards and the associated risk. For airworthiness elements this is a required function of operator's Continuing Analysis and Surveillance System (CASS), required by 14 CFR part 121.373. The director of safety and the quality assurance department often work together to accomplish this function for the operator. Negative findings could require amendments to the safety/internal evaluation program or CASS audit forms or checklists.

prog	ram or CASS audit forms or checklists.	
Tasi	ks	
	The inspector shall accomplish the following tasks:	
1	Review the control questions in Section 2 of this SAI.	
2	Review the operator's policies, procedures, instructions, and information to gain an of the process measurements accomplished for this element.	understanding
Que	stions	
3.1	Are there process measurements that evaluate whether the operator's policies, procedures, and controls are achieving the desired results?	Yes No, Explain
	Note(s): Inspectors should refer to the controls in section 2 of this SAI for possible process measurements for this element.	
	Persons engaged in this process should have a method for identifying undesired results.	
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
3.2	Do the operator's process measurements assess the performance of the processes associated with this element?	Yes No, Explain
	Note(s): Verify audits exist to measure this elements performance.	
	Verify audits are scheduled for this element.	
	Verify audits ensure everyone, including all outsource providers; comply with the operator's program, manual and all applicable regulations and statutes.	
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
3.3	Does the operator's program require the documentation of process measurement results?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
3.4	Does the operator's program describe how the process measurement results are	Yes

used to improve the ability to achieve the desired results?

☐ No, Explain

	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	
3.5	Does the organization that conducts the process measurements have direct access to the person with responsibility for this element?	Yes No, Explain
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic	

	SAI SECTION 3 - PROCESS MEASUREMENT ATTRIBUTE
	Drop-Down Menu
1.	No process measurements specified.
2.	Documentation for the process measurements does not identify (who, what, when, where, how).
3.	Inability to identify negative findings.
4.	No provisions for implementing corrective actions.
5.	Ineffective follow-up to determine effectiveness of corrective actions.
6.	Resources requirements (personnel, facilities, equipment, technical data).
7.	Other.

SAI SECTION 4 - INTERFACES ATTRIBUTE				
Objective: Data collected in this section helps determine if the operator manages the interfaces (i.e. interactions) associated with this element. Interfaces occur in a procedure where the responsibility for accomplishing work is transferred from one person, work group, or organization to another. Procedures must be detailed enough to ensure the smooth transfer of work and information.				
Tasks				
	The inspector shall accomplish the following task:			
1	Review interfaces associated with the processes for this element.			
Questions				
4.1	Where interfaces exist in this element, are the procedures written in enough detail to preclude a breakdown or discontinuity in the activity?	Yes No, Explain		
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic			
	SAI SECTION 4 - INTERFACES ATTRIBUTE			
Drop-Down Menu				
1.	No interfaces specified.			
2.	The following interfaces not identified within the certificate holder's manual system:			
3.	Interfaces listed are inaccurate.			
4.	Specific location of interfaces not identified within the manual system.			

5.

Other

SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE

Objective:

Data from questions in this section will help the determine if there is an identifiable, qualified (when required by CFR), and knowledgeable person who is:

- Responsible for the process,
- Answerable for the quality of the process, and
- Has the authority to establish and modify the process.

Tasks		
	The inspector shall accomplish the following tasks:	
1	Identify the person(s) who has overall responsibility for this element.	
2	Identify the person(s) who has the authority to revise the procedures associated with this element.	
3	Review the duties and responsibilities of the above person(s).	
4	Review the appropriate organizational chart.	

Questions			
5.1	Is an individual(s) identified who is responsible for the quality of the procedures associated with this element?	Yes No, Explain	
	Updated: Rev # 3 on 09/15/2009 Kind Of Question: Flag, Supplemental, Domestic		
5.2	Is an individual(s) identified who has the authority to establish and modify the policies, procedures, instructions, and information associated with this element?	Yes No, Explain	
	Updated: Rev # 3 on 09/15/2009		
	Kind Of Question: Flag, Supplemental, Domestic		
5.3	Are duties and responsibilities documented for those who manage the procedures associated with this element?	Yes No, Explain	
	Updated: Rev # 3 on 09/15/2009		
	SRRs: 121.135(b)(2) Kind Of Question: Flag, Supplemental, Domestic		
5.4	Does the operator document the procedures for delegation of authority for this element?	Yes No, Explain	
	Updated: Rev # 3 on 09/15/2009 SRRs: 121.135(a)(1) Kind Of Question: Flag, Supplemental, Domestic		

	SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE
	Drop-Down Menu
1	Not documented

Documentation unclear.
 Documentation incomplete.
 Other.